

Abstract

Methods of improving shrink-resistance of natural fibers (e.g., wool, wool fibers, animal hair, cotton), synthetic fibers (e.g., acetate, nylon, polyester, viscose rayon), or blends thereof (e.g., wool/cotton blends), or fabrics or yarns composed of natural fibers, synthetic fibers, or blends thereof, involving contacting the fibers (or fabric or yarn) with NaOH, H₂O₂, gluconic acid, dicyandiamide, and non-ionic surfactant (e.g., Triton X surfactant such as Triton X-100 and preferably Triton X-114), and optionally subsequently contacting the fibers (or fabric or yarn) with protease and non-ionic surfactant and optionally sodium sulfite and optionally triethanolamine and optionally polyacrylamide polymer. The methods do not utilize dichloroisocyanuric acid, chloroamines, peroxymonosulfuric acid, monoperoxyphthalic acid, permanganate, chlorine gas, sodium hypochlorite, or aminoplast resins.